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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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45503	7590	11/03/2004	EXAMINER	
DILLON & YUDELL LLP 8911 N. CAPITAL OF TEXAS HWY., SUITE 2110 AUSTIN, TX 78759			CHEN, WENPENG	
			ART UNIT	PAPER NUMBER
			2624	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/039,973	Applicant(s) PALMER ET AL.	
	Examiner Wenpeng Chen	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/25/01</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-6, 12-14, and 20-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for the following reasons.

There are insufficient antecedent bases for the following limitations.

- Claim 4 recites "the storing step" in line 1.
- Claim 6 recites "the storing step" in line 1.
- Claim 12 recites "the storing means" in line 1.
- Claim 14 recites "the instruction for storing" in line 1.
- Claim 20 recites "the instruction for storing" in line 1.
- Claim 22 recites "the instruction for storing" in line 1.

Claim Rejections - 35 USC § 101

3. Claims 17-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Each of the listed claims recites a computer program product in a computer usable medium. Because a computer program product can be just a computer algorithm code, each of the above-listed claims claims only the code that is stored in the medium, not a physical medium carrying the code. The computer program product is a computer program per se.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-2, 4, 6-10, 12, and 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Mead (US patent 6,683,993.)

For Claims 9, 12, 14, and 16, Mead teaches an apparatus for reducing datastream transmission bandwidth requirements, comprising:

-- means for determining if an image data structure is present in a datastream; (column 2, line 66 to 23; Audio and video data are inputted to segment element 16 of Fig. 1. Segment

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element 16 segments the data according its type. The segmenting process inherently has a determining mean.)

-- means for extracting said image data structure from said datastream in response to such determination; (column 2, line 66 to 23; Audio and video data are inputted to segment element 16 of Fig. 1. Segment element 16 extracts the video data.)

-- means for dividing said image data structure into one or more subregions; (element 46 of Fig. 2; column 3, lines 42-55)

-- means for associating a corresponding identifier with each of said one or more subregions; (column 3, line 56 to column 4, line 15)

-- means for determining if any subregion is substantially identical to a previous subregion; (column 3, line 56 to column 4, line 26; element 50 of Fig. 2)

-- means for replacing each subregion which is substantially identical to a previous subregion with the corresponding identifier of said previous subregion; (column 3, line 56 to column 4, line 26; element 50 of Fig. 2; The symbolic code is the identifier.)

-- means for generating a packaged image data, which includes only selected subregions and corresponding identifiers for substantially identical subregions; (column 3, line 56 to column 4, line 26; column 4, lines 47-67; A packaged image data of both unrecognized objects and symbolic codes of recognized objects are formed in multiplexer 54 and variable length coder of Fig. 2.)

-- inserting said packaged image into the data stream; (column 3, line 56 to column 4, line 26; column 4, lines 47-67; A packaged image data of both unrecognized objects and

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symbolic codes of recognized objects are formed in multiplexer 54 and variable length coder of Fig. 2.)

-- means for transmitting said modified data stream and a decoding table correlating corresponding identifier and transmitted subregions where transmission band width requests are reduced; (column 3, line 56 to column 4, line 26; column 4, lines 47-67; The data are transmitted as element 67 of Fig. 2. The data of unrecognized objects and their symbolic codes form a decoding table.)

-- a storing means comprises means for retaining a symbol dictionary of references and identifiers employed by the determining means in processing a previously analyzed image data structure; (object library 22 of Fig. 1)

-- wherein the storing means further comprises means for storing a preloaded set of references on a sending machine and omitting preloaded references from the decoding table; (column 3, line 56 to column 4, line 26; column 4, lines 47-67; The data are transmitted as element 67 of Fig. 2. The data of unrecognized objects and their symbolic codes form a decoding table. The recognized objects and their corresponding symbolic codes are preloaded in libraries 22 and 32 of Fig. 1.)

-- means for examining a datastream for the presence of one or more image data items; (column 2, line 66 to 23; Audio and video data are inputted to segment element 16 of Fig. 1. Segment element 16 segments the data according its type. Segment element 16 extracts the video data.)

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-- means for, responsive to the presence of one or more image data items, examining the one or more image data items for the presence of one or more repeated visual data elements; (column 3, line 56 to column 4, line 26; element 50 of Fig. 2)

-- means for, responsive to the presence of one or more repeated visual data elements, recoding the datastream with one or more replacement markers inserted to replace the one or more repeated visual data elements and with a decoding table for translating the one or more replacement markers during decoding. (column 3, line 56 to column 4, line 26; column 4, lines 47-67)

For Claims 10 and 15, Mead teaches an apparatus for decoding a packaged image, comprising:

-- means for determining whether a packaged image is present in a datastream; (Figs. 1 and 3; column 5, lines 28-41)

-- means for, responsive to determining that a packaged image is present in a datastream, extracting the packaged image; (Figs. 1 and 3; column 5, lines 28-41)

-- means for separating the packaged image into an image data structure and a decoding table containing one or more references and one or more corresponding identifiers; (Figs. 1 and 3; column 5, lines 28-58)

-- means for modifying the image data structure to replace any identifiers present in the image data structure with corresponding references; (Figs. 1 and 3; column 5, lines 28-58; Objects are generated based on the transmitted symbolic codes.)

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-- wherein the modifying means further comprises means for replacing identifiers with references from a preloaded decoding table. (Figs. 1 and 3; column 5, lines 28-58; Objects are generated based on the transmitted symbolic codes. The generation is based on the library 84.)

The above-cited passages of Mead also teach the corresponding methods of Claims 1-2, 4, and 6-8.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mead (US patent 6,683,993) as applied to Claims 1 and 9, and further in view of Mehrotra et al. (US patent 6,571,016.)

Mead teaches the parent Claims 1 and 9.

However, Mead does not teach the feature related to the recited effective size.

Mehrotra teaches an apparatus for coding images with codebook (library), comprising:

-- a dividing means comprises means for analyzing an image to determine the most effective size of a subregion. (Fig. 12a; column 19, lines 8-17; The analyzing means is step 1212 of Fig. 12a for optimizing the combination of quality and compression efficiency.)

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It is desirable to optimize the combination of quality and compression efficiency in image compression. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Mehrotra's teaching to decide the most effective size for each subregion of Mead's image for compression, because the combination improves combination of quality and compression efficiency.

8. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mead (US patent 6,683,993) as applied to Claims 4 and 12, and further in view of Frazier et al. (US patent 5,689,255.)

Mead teaches the parent Claims 4 and 12.

However, Mead does not teach the feature related to the recited statistics and removing references.

Frazier teaches an apparatus for coding images with codebook (library), comprising:

-- means for maintaining descriptive statistics on the frequency with which references stored in the symbol dictionary are employed and selectively removing the references when the frequency of their occurrence falls. (column 7, lines 45-63)

It is desirable to optimize image compression with a finite size code table (code book) by removing references that fail to occur recently to make room for new entry. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply Frazier's teaching to removing stored references that fail to appear recently to make room for newly unrecognized objects and their corresponding symbolic codes of Mead's system, because the combination improves image compression with a finite size code table.

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9. Claims 17-18, 20, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mead (US patent 6,683,993) as applied to Claims 1-2, 4, 6-8, and further in view of Pearlman et al. (US patent 5,764,807.)

Mead, as discussed above, teaches the corresponding method claims 1, 4, 6, 2, 7-8 of program-product of Claims 17, 20, 22, 18, and 23-24, respectively. However, Mead does not explicitly teach a computer program product as recited in the claims.

Pearlman teaches a computer program product comprising a computer readable medium carrying a computer program. (Column 2, lines 47-53)

It is desirable to make a processing method portable from a computer to another computer. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to store the processing steps of the method taught by Mead in a computer readable medium taught by Pearlman, because the combination makes the processing method portable and therefore increase its application.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mead and Mehrotra as applied to Claim 3, and further in view of Pearlman et al. (US patent 5,764,807.)

The combination of Mead and Mehrotra, as discussed above, teaches the corresponding method claim 3 of program-product of Claim 19. However, the combination does not explicitly teach a computer program product as recited in the claims.

Pearlman teaches a computer program product comprising a computer readable medium carrying a computer program. (Column 2, lines 47-53)

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It is desirable to make a processing method portable from a computer to another computer. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to store the processing steps of the method taught by the combination of Mead and Mehrotra in a computer readable medium taught by Pearlman, because the combination makes the processing method portable and therefore increase its application.

11. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mead and Frazier as applied to Claim 5, and further in view of Pearlman et al. (US patent 5,764,807.)

The combination of Mead and Frazier, as discussed above, teaches the corresponding method claim 5 of program-product of Claim 21. However, the combination does not explicitly teach a computer program product as recited in the claims.

Pearlman teaches a computer program product comprising a computer readable medium carrying a computer program. (Column 2, lines 47-53)

It is desirable to make a processing method portable from a computer to another computer. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to store the processing steps of the method taught by the combination of Mead and Frazier in a computer readable medium taught by Pearlman, because the combination makes the processing method portable and therefore increase its application.

Conclusion

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 703 306-2796. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on 703 308-7452. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications. TC 2600's customer service number is 703-306-0377.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4700.

Wenpeng Chen
Primary Examiner
Art Unit 2624

October 28, 2004

